



DEPARTMENT OF THE AIR FORCE
59TH MEDICAL WING (AETC)
JOINT BASE SAN ANTONIO - LACKLAND TEXAS



27 JULY 2017

MEMORANDUM FOR ST
ATTN: RAQUEL LOPEZ

FROM: 59 MDW/SGVU

SUBJECT: Professional Presentation Approval

Your paper, entitled **Research Today Volume 3, Issue 3 July 2017 - Newsletter** presented at/published to **General Distribution; Available on 59 MDW/ST AFMS Kx Site, Email Distribution, etc.** in accordance with MDWI 41-108, has been approved and assigned local file #**17293**.

Pertinent biographic information (name of author(s) title, etc.) has been entered into our computer file. Please advise us (by phone or mail) that your presentation was given. At that time, we will need the date (month, day and year) along with the location of your presentation. It is important to update this information so that we can provide quality support for you, your department, and the Medical Center commander. This information is used to document the scholarly activities of our professional staff and students, which is an essential component of Wilford Hall Ambulatory Surgical Center (WHASC) internship and residency programs.

Please know that if you are a Graduate Health Sciences Education student and your department has told you they cannot fund your publication, the 59th Clinical Research Division may pay for your basic journal publishing charges (to include costs for tables and black and white photos). We cannot pay for reprints. If you are a 59 MDW staff member, we can forward your request for funds to the designated Wing POC at the Chief Scientist's Office, Ms. Alice Houy, office phone: 210-292-8029; email address: alice.houy.civ@mail.mil.

Congratulations, and thank you for your efforts and time. Your contributions are vital to the medical mission. We look forward to assisting you in your future publication/presentation efforts.

Linda Steel-Goodwin

LINDA STEEL-GOODWIN, Col, USAF, BSC
Director, Clinical Investigations & Research Support

PROCESSING OF PROFESSIONAL MEDICAL RESEARCH/TECHNICAL PUBLICATIONS/PRESENTATIONS

INSTRUCTIONS

USE ONLY THE MOST CURRENT 59 MDW FORM 3039 LOCATED ON AF E-PUBLISHING

1. The author must complete page two of this form:
 - a. In Section 2, add the funding source for your study [e.g., 59 MDW CRD Graduate Health Sciences Education (GHSE) (SG5 O&M); SG5 R&D; Tri-Service Nursing Research Program (TSNRP); Defense Medical Research & Development Program (DMRDP); NIH; Congressionally Directed Medical Research Program (CDMRP) ; Grants; etc.]
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2. Print your name, rank/grade, sign and date the form in the author's signature block or use an electronic signature.
3. Attach a copy of the 59 MDW IRB or IACUC approval letter for the research related study. If this is a technical publication/presentation, state the type (e.g. case report, QA/QI study, program evaluation study, informational report/briefing, etc.) in the "Protocol Title" box.
4. Attach a copy of your abstract, paper, poster and other supporting documentation.
5. Save and forward, via email, the processing form and all supporting documentation to your unit commander, program director or immediate supervisor for review/approval.
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usaf.jbsa.59-mdw.mbx.wing-crd-publications-and-presentations@mail.mil. **This should be accomplished no later than 30 days before final clearance is required to publish/present your materials.** If you have any questions or concerns, please contact the 59 CRD/Publications and Presentations Section at 292-7141 for assistance.
8. The 59 CRD/Publications and Presentations Section will route the request form to clinical investigations, 502 ISG/JAC (Ethics Review) and Public Affairs (59 MDW/PA) for review and then forward you a final letter of approval or disapproval.
9. Once your manuscript, poster or presentation has been approved for a one-time public release, you may proceed with your publication or presentation submission activities, as stated on this form. **Note:** For each new release of medical research or technical information as a publication/presentation, a new 59 MDW Form 3039 must be submitted for review and approval.
10. If your manuscript is accepted for scientific publication, please contact the 59 CRD/Publications and Presentations Section at 292-7141. This information is reported to the 59 MDW/CC. All medical research or technical information publications/presentations must be reported to the Defense Technical Information Center (DITC). See 59 MDWI 41-108, *Presentation and Publication of Medical and Technical Papers*, for additional information.
11. The Joint Ethics Regulation (JER) DoD 5500.07-R, *Standards of Conduct*, provides standards of ethical conduct for all DoD personnel and their interactions with other non-DoD entities, organizations, societies, conferences, etc. Part of the Form 3039 review and approval process includes a legal ethics review to address any potential conflicts related to DoD personnel participating in non-DoD sponsored conferences, professional meetings, publication/presentation disclosures to domestic and foreign audiences, DoD personnel accepting non-DoD contributions, awards, honoraria, gifts, etc. The specific circumstances for your presentation will determine whether a legal review is necessary. **If you (as the author) or your supervisor check "NO" in block 17 of the Form 3039, your research or technical documents will not be forwarded to the 502 ISG/JAC legal office for an ethics review.** To assist you in making this decision about whether to request a legal review, the following examples are provided as a guideline:

For presentations before professional societies and like organizations, the 59 MDW Public Affairs Office (PAO) will provide the needed review to ensure proper disclaimers are included and the subject matter of the presentation does not create any cause for DoD concern.

If the sponsor of a conference or meeting is a DoD entity, an ethics review of your presentation is not required, since the DoD entity is responsible to obtain all approvals for the event.

If the sponsor of a conference or meeting is a non-DoD commercial entity or an entity seeking to do business with the government, then your presentation should have an ethics review.

If your travel is being paid for (in whole or in part) by a non-Federal entity (someone other than the government), a legal ethics review is needed. These requests for legal review should come through the 59 MDW Gifts and Grants Office to 502 ISG/JAC.

If you are receiving an honorarium or payment for speaking, a legal ethics review is required.

If you (as the author) or your supervisor check "YES" in block 17 of the Form 3039, your research or technical documents will be forwarded simultaneously to the 502 ISG/JAC legal office and PAO for review to help reduce turn-around time. If you have any questions regarding legal reviews, please contact the legal office at (210) 671-5795/3365, DSN 473.

NOTE: All abstracts, papers, posters, etc., should contain the following disclaimer statement:

"The views expressed are those of the [author(s)] [presenter(s)] and do not reflect the official views or policy of the Department of Defense or its Components"

NOTE: All abstracts, papers, posters, etc., should contain the following disclaimer statement for research involving humans:

"The voluntary, fully informed consent of the subjects used in this research was obtained as required by 32 CFR 219 and DODI 3216.02_AFI 40-402."

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"The experiments reported herein were conducted according to the principles set forth in the National Institute of Health Publication No. 80-23, Guide for the Care and Use of Laboratory Animals and the Animal Welfare Act of 1966, as amended."

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18. AUTHOR'S PRINTED NAME, RANK, GRADE Raquel L. Lopez, CTR, 59 MDW/ST		19. AUTHOR'S SIGNATURE LOPEZ RAQUEL LYNN.1390331670	20. DATE July 25, 2017
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29. COMMENTS <input checked="" type="checkbox"/> APPROVED <input type="checkbox"/> DISAPPROVED The newsletter is approved.		
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Treatment-Seeking Beliefs and Behaviors in Air Force Nursing Personnel

Lt Col Stephen H. A. Hernandez, USAFR NC*; Col Brenda J. Morgan, USAF NC†; Mark. B. Parshall, PhD, RN, FAAN*

Perceptions of stigma and barriers associated with seeking mental health services have been described in past research with military service members who reported or screened positively for mental health concerns or who reported an intention to seek care. The reported influence of stronger perceptions of stigma on treatment seeking has varied. Materials and Methods: An anonymous, online survey was administered to Air Force nursing personnel (N = 250) at three locations to describe beliefs associated with seeking mental health treatment and to investigate the extent to which stigma and barriers, stress, and resilience were related to mental health treatment seeking.

Over 40 percent reported having accessed mental health services in their lifetime. A majority who accessed mental health services did so during their service, but there was no significant relationship with a deployment. Approximately 44 percent reported experiencing a current stress or emotional problem, and 28 percent accessed mental health services within the past 6 months. Levels of stress were significantly higher among individuals who accessed mental health care in the previous 6 months. There were no significant differences in stigma, barriers to care, or resilience on the basis of having accessed mental health care. Military resources were preferred to address a mental health concern, and respondents preferred to seek care from a mental health professional rather than other providers.

Additional resources may be needed to address military personnel's non-deployment-related mental health concerns. Improved screening for increased levels of stress may aid in identifying service members who could benefit from referral to a mental health professional.

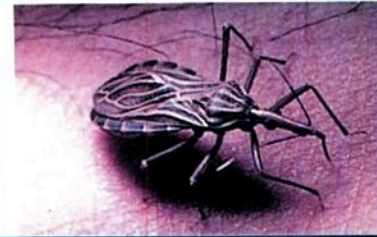
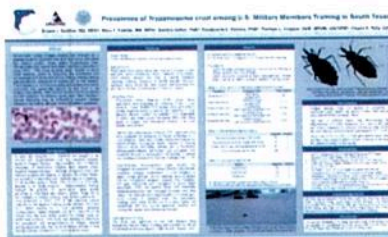
For the full article, please go the following: *MILITARY MEDICINE*, Vol. 182, July/August 2017 *Treatment-Seeking Beliefs and Behaviors in Air Force Nursing Personnel*; Downloaded from publications.amsus.org: AMSUS-Association of Military Surgeons of the U.S. IP: 202.177.173.189 on 06 Jul 17.

Impact of Chagas Project

The research project entitled "The Impact of Chagas Disease on Military Training in Texas" was designed to determine the risk of Chagas disease among military trainees and instructors at greatest risk in the JBSA field training areas. The parasite that causes Chagas was discovered in biting insect vectors, in Military Working Dogs, and in the local wildlife population. Since Chagas can be asymptomatic for years or even decades following the initial infection, and infection can cause severe cardiac and/or gastrointestinal disease, a study was initiated to determine the prevalence and seroprevalence of human infection.

Preliminary results of the study were presented at the Military Health System Research Symposium (MHSRS), at the James Steele Diseases in Nature Transmissible to Man Conference, and at ID Week, the annual conference of the Infectious Diseases Society of America. Additionally, data were shared with the FDA, who reached out to the project team to discuss whether American blood donors should continue to be screened once prior to their first donation, as is the current practice, or whether they should be screened prior to each donation.

After enrollment and testing of over 1000 subjects who spent time in the field training areas surrounding JBSA, it was determined that Chagas disease is currently not a significant threat to military training in JBSA area. Details will be available in an upcoming article to be published in the *American Journal of Tropical Medicine & Hygiene*.



Bidding Farewell to Our Director of Nursing Research Division and Interim Deputy Chief Scientist, Col Brenda Morgan

59th Medical Wing, Science & Technology (59 MDW/ST) bids farewell to Col Brenda Morgan as she departs for Wright Patterson AFB to assume the role of Dean, USAF School of Aerospace Medicine (USAFSAM). Col Morgan arrived at the 59 MDW in September 2011 after completing the PhD in Nursing Science program at Uniformed Services University. She served as a nurse scientist until 2013 when she took over as Director, 59 MDW Nursing Research Division. Col Morgan took on the additional duty as interim Deputy Chief Scientist January-June 2016 and May-July 2017.

The following quotes are just a few of the individuals Col Morgan has touched and mentored throughout the years at the 59 MDW/ST. "Col Morgan has been an invaluable member of the Human Research Protection Program team for accreditation with excellent attention for detail and numerous insightful suggestions" --- *Col Steel Goodwin, Chair of HRPP Working Group and all the Domain II members of HRPP Steering Committee.* "Col Morgan is a detailed-oriented leader who reviewed and if necessary re-wrote every document included in the AAHRPP submission, thinking about how each one would affect the practice of research and meet regulation" --- *Dr. Deutsch, Domain I member of HRPP Steering Committee.* "Every once in a while, you meet a person that you instantly click with. You're definitely one of those people for me. I'm so fortunate that we got to spend time together collaborating and coordinating for the sake of AAHRPP preparation. If I was asked to describe what kind of leader you've been, words like encouraging, kind, patient, inspiring, influential, helpful, entertaining in addition to other wonderful adjectives that come easily to mind. You have been a truly magnificent leader --- enjoy your new position, I'll miss you greatly!" --- *Ms. Tavish, Domain I member of HRPP Steering Committee.* "How would I describe Col Morgan? Superlative leader and exceptional mentor; in a word - Extraordinary. When Col Morgan provided constructive criticism, she would always say "...this is me caring." --- *Maj Gardner, Director of Nursing Research Division.* "Col Morgan was always first to jump in and help with a task no matter how small or large; an extraordinary leader and team player who was instrumental to the success of our mission." --- *Dr. Debra Niemeyer, Chief Scientist.*

The Director, Nursing Research Division was handed over to Maj Cubby Gardner as Lt Col Killian assumed the role of Deputy Chief Scientist.



Lt Col Killian (Left), Col Morgan (Middle) and Maj Gardner (Left)



A Changing of the Guard for 59 MDW/ST Leadership: Introducing Our New Deputy Chief Scientist, Lt Col Jacqueline Killian



Col Kevin Steel served as the Deputy Chief Scientist since fall 2016 at which time he transferred from the San Antonio Military Medical Center as the Cardiovascular Disease Fellowship Program Director. Although at the helm for less than a year Col Steel provided outstanding leadership for the entire ST enterprise, fostering collaboration across the Wing, SAMHS and the greater San Antonio scientific community. Col Steel has returned to the clinic as the lead cardiologist for Cardiology Services at Wilford Hall. He continues valuable advisement as ST Senior Medical Consultant.

Lt Col Jacqueline Killian now has the honor to serve as the Deputy Chief Scientist to Dr. Debra Niemeyer, Chief Scientist. Lt Col Killian arrived at the 59 MDW in September 2015 after completing her PhD in Nursing Science at the Uniformed Services University of the Health Sciences. Lt Col Killian has served as a nurse scientist since her arrival, intermittently providing coverage as the Director, Nursing Research Division and Chief Nurse, 59 Medical Operations Group (MDOG). Lt Col Jackie Killian's master's degrees in human relations and nursing education enhance her leadership style and positively influence her perspective of organizational operations. She is excited to have been given this challenging opportunity.

Lt Col Kevin Steel's Promotion to Colonel

Congratulations to Lieutenant Colonel Kevin Steel on his recent promotion to Colonel. Dr. Steel was accompanied by his wife, Rhonda and two sons Dalton and Jacob. His well-attended ceremony within the Department of Cardiology was narrated by COL (ret) Gregg Anders and Col Samuel Jones. Both of these physicians took the time to review Col Steel's past successes and challenges in a lighthearted manner. The ceremony concluded with Dr. Steel's sons pinning on his new rank just as they did 6 years prior in the same room. Again, we congratulate Col Steel and his family on this superb career achievement!



First-Ever ST Resilience Day and Farewell BBQ Event

On June 9, 2017 the Science and Technology Division held its first-ever ST Resilience Day and Farewell BBQ event at our new location which was attended by over 90 personnel with representation from all of the research program areas across Joint Base San Antonio (JBSA), to include CRD, CAMD, TSRL, USAISR and JiMoT. Dr. Debra Niemeyer kicked off the event, honoring Col Kevin Steel, the outgoing Deputy Chief Scientist and cardiologist, who returned to cardiology services 22 May 2017; and Col Brenda Morgan, Director of the Nursing Research Division, who departed 14 July 2017 for re-assignment to USAFSAM, Wright Patterson, Ohio. All in attendance enjoyed a picnic barbeque spread that was delicious and plentiful! Following the meal, staff participated in team building activities, partnering up to play sport games. Some also joined in the Laughter Yoga introductory session led by Lt Col Jackie Killian. The afternoon provided opportunity for networking and collaboration in a more relaxed setting. Special thanks and appreciation to the planning committee: Ms. Lockett, Ms. Stotler, Ms. Lopez, Lt Col Jackie Killian and Mr. JR Spencer for his master grilling skills, and those to who helped with set-up, clean-up and returning rental items. Overall the event was a HUGE success, enjoyed by all in attendance. More pictures of our event are on page 4.



First-ever ST Resilience Day and Farewell BBQ Event Pictures



2017 San Antonio Military Healthcare Systems & Universities Research Forum (SURF)

The Third Annual 2017 San Antonio Military Healthcare Systems & Universities Research Forum (SURF) was held on Friday, June 16, 2017 at The University of Texas at San Antonio Main Campus, H-E-B University Center Ballroom. This event was designed to showcase the work of trainees, faculty, clinicians, staff and students from multiple disciplines and public health agencies and foster collaboration across San Antonio. The theme this year, "Evidence-Based Practice & Research in Healthcare: Encouraging Collaborative Partnerships", had a forum of participants that had the opportunity to present and share research, practice, policy, and collaborations; earn continuing education credits/units (e.g., CME, CNE); connect and network with scholars and practitioners from SAMHS, academic institutions, and public government agencies, and private organizations for education, research, policy, and clinical practice collaboration.

Poster Award Winners:

1st Place: Lauren Reeves, Christine Deforest, Virginia Blackman, John Alex, Alejandra Mora, Crystal Perez, Dominique Selby, Avery Kester and Benjamin Walrath. An Evaluation of Navy En Route Care Training Using a High-fidelity Medical Simulation Scenario of Interfacility Patient Transport. AF En Route Care Research Center, 59 MDW/ST, JBSA-Fort Sam, TX.

2nd Place: Samuel Tahk, Renford Cindass, Kevin Wu, Nicholas Robbins, Vijay Gorantla and Michael Davis. A Novel Bioresorbable/Biointegratable/Biocompatible Dressing for Negative Pressure Wound Therapy. AF RESTOR Program, 59 MDW/ST and USAISR, JBSA-Lackland and—Fort Sam Houston, TX.

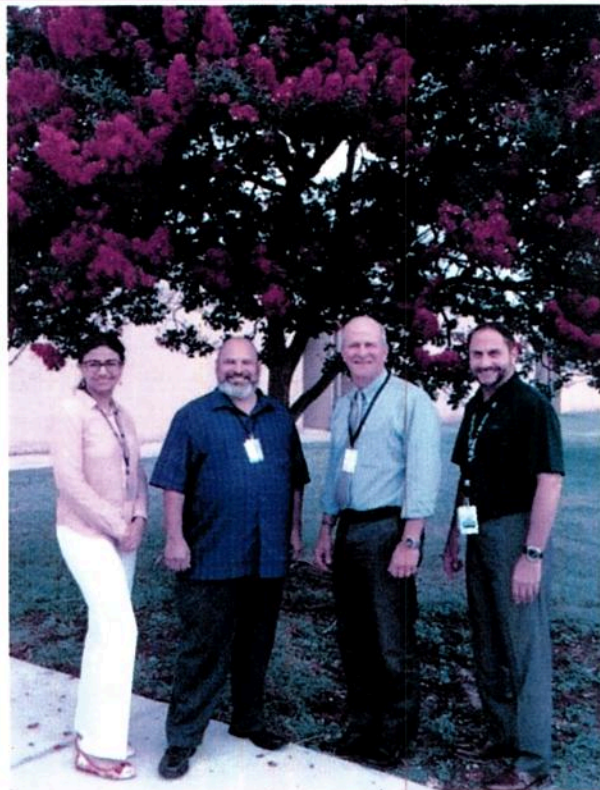
3rd Place: Jae Hyek Choi, Teryn Roberts, Vitali Karaliou, George Harea, Kyle Sieck, Brendan Beely and Andriy Batchinsky. Dynamics of Systemic Expression of High Mobility Group Protein Box 1 During ECLS at Ground Level and High Altitude. USAISR, JBSA-Fort Sam Houston, TX.



Introducing Our New 59th Medical Wing ORTA Office

The new 59 MDW/ST Office of Research and Technology Applications (ORTA) serves as the central point for clinical research Technology Transfer (T2). They facilitate the conversion of clinical research into application through enabling researchers to partner with industry and academia. The ORTA office assesses clinical research and development projects in order to recognize commercial applications and ensure intellectual property considerations are integrated into acquisition strategies for advanced technologies that foster Air Force and DoD medical needs. The ORTA has four strategic goals: (1) Drive innovation, 2) Improve internal and external communication, 3) Foster partnerships with minimal to no use of AF funding, and 4) Define T2 requirements and utilize emerging knowledge, research and technology.

The 59 MDW/ST ORTA team has the mission to build new relationships with researchers in order to maximize the benefits these strategic goals offer; foster research and development, and to grow new partnerships with industry, academia and small business. They can help draft the following T2 products: **CRADA**- Cooperative Research and Development Agreements, **MTA** - Material Transfer Agreements, **NDA** - Non-Disclosure Agreements, **PLA** - Patent License Agreements, **CTA** - Commercial Test Agreements, **EPA** - Educational Partnership Agreements, **Patent & Invention Disclosure** forms, **Copyrights**, and **Trademarks**. Please inquire using the Organizational Box: usaf.jbsa.59-mdw.mbx.59-mdw-st-technology-transfer-office@mail.mil.



The staff includes (From Right to Left in Picture):

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James Weissmann, MS- Technology Transfer Specialist, email: james.w.weissmann.ctr@mail.mil; 210-292-1019

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Ehsaneh "Sunny" Shahhaidar, PhD- Technology Transfer Consultant, email: ehsaneh.shahhaidar.ctr@mail.mil; 210-292-1018

Capt Patrick Ng Wins 2nd Place at the SAUSHEC Research Day Resident Podium Competitions

Capt Patrick Ng, USAF, graduated Summa Cum Laude from Northeastern University with a dual Bachelor/Masters of Science degree in Chemistry in 2010. He completed medical school at the University of Vermont College of Medicine in Burlington, Vermont, in 2014. He is currently an Emergency Medicine Resident at San Antonio Military Medical Center (SAMMC). His toxicology research interest peaked when he began to work with Lt Col (Dr.) Vik Bebart and then Maj (Dr.) Joseph Maddry, Director of En route Care Research Center and CREST Research. Dr. Ng has been the Principal Investigator and Associate Investigator on 4 ongoing WHASC IACUC approved protocols. He has presented the research findings at SURF 2016, San Antonio Uniformed Services Health Education Consortium (SAUSHEC) Research Day 2017 and he will be presenting at the upcoming Society for Academic Emergency Medicine (SAEM) 2017 Conference. Most recently, Dr. Ng gave a podium/oral presentation entitled "Efficacy of intravenous cobinamide versus hydroxocobalamin or saline for treatment of severe hydrogen sulfide toxicity in a swine (*Sus scrofa*) model" at the SAUSHEC Research Day Resident Podium Competition in April 2017, where he won 2nd place.



Bidding Farewell and Good Luck to One of the Chief Scientist's Own

Joshua Calcote, DrPH, was hired in September 2015 as a Contractor at the 59th Medical Wing (59 MDW) Science and Technology (S & T), Clinical Research Division, to support the 59 MDW Human Research Protection Program (HRPP) efforts towards accreditation from the Association for the Accreditation of Human Research Protection Programs (AAHRPP) – a history-making first for any component of the Department of Defense (DoD). Over the last two years, Dr. Calcote has served as an integral member of the HRPP and AAHRPP accreditation working group and has been key to preparation for accreditation application submission, to include creating and/or substantially revising 59 MDW HRPP and Institutional Review Board (IRB) policies, procedures, forms, and templates. His efforts contributed significantly to the Wing's successful AAHRPP application submission/review and the June 5-6, 2017 accreditation site visit. The 59 MDW is awaiting AAHRPP notification of accreditation status that is expected after the September 2017 AAHRPP Accreditation Council meeting.

The overwhelmingly positive and successful AAHRPP site visit has closed this chapter in Dr. Calcote's tenure with the 59 MDW and their journey seeking AAHRPP accreditation. Dr. Calcote is now turning his attention to furthering his education. Dr. Calcote will leave the 59 MDW at the end of July to pursue his long-term dream of becoming a physician. He is attending St. George's University School of Medicine in Grenada, West Indies – a rigorous four-year medical program lauded for routinely placing their graduates into highly sought-after and competitive medical residencies throughout the United States. He will live on the island for the first two years of school, before returning to the United States for two years of clinical rotations. An avid golfer, Dr. Calcote is looking forward to (hopefully) improving his golf game in-between attending lectures and studying. He has also promised to keep in touch with the Chief Scientist's Office with updates and news from the Caribbean.

Dr. Calcote enjoyed his time working for the Air Force and the 59 MDW/ST in support of the Wing's human subject research protection improvement efforts. Dr. Calcote envisions a surge in new cooperative research endeavors between the 59 MDW and other elite, AAHRPP-accredited research organizations – projects that will become the launch pad for important military medical discoveries. Dr. Calcote leaves the 59 MDW secure in the knowledge that he helped contribute to paving the way for innovative clinical research in the Air Force and hopes that the 59 MDW will be a shining example to other DoD organizations contemplating their own AAHRPP accreditations in the future.



TSgt Hill is Selected to Master Sergeant

On May 23rd the 59 MDW/ST managed to surprise TSgt Hill with the news of his selection to MSgt. TSgt Hill arrived at the ST conference room having been summoned by Col Morgan for an ASAP meeting regarding staff ancillary training with Dr Valtier and Dr Niemeyer (by phone). TSgt Hill was not expecting the arrival of Col Scott Suckow, 59 MDW/SGA, and MSgt Stephanie Thompson, 59 MDW Superintendent. Many of the 59 MDW/ST staff members were in attendance as Col Suckow made the announcement regarding the selection. TSgt Hill's supervisor, Dr Valtier, along with retired SMSgt Shelly Tavish were selected to "stick on" TSgt Hill's new "stripe".

MSgt (sel) Hill has a line number of 0178 and is expecting to "sew on" his well-earned rank August 1, 2017. The 59 MDW/ST is very proud of MSgt (sel) Hill for his many accomplishments.



59 MDW Researchers Participate in AFMS Technology Displays at the Committee of the Chiefs of Military Medical Services in NATO (COMEDS) 2017, JB Andrews

The Committee of the Chiefs of Military Medical Services in NATO (COMEDS) is a committee for medical care within NATO allies. The main focus for this meeting is to act as a central point for the development and coordination of military medical matters and to provide medical advice to the NATO military committee. COMEDS makes recommendations concerning the development and assessment of NATO military medical policy and procedures for medical support. COMEDS seeks to improve existing arrangements between member countries in the fields of coordination, standardization and interoperability. It also helps improve the exchange of information between countries so advances made by one member are available to all. The COMEDS meetings are conducted bi-annually and include participants from member and partner countries. The current COMEDS Chairman is MG Jean-Robert Bernier (Canada). This was the 47th NATO COMEDS Plenary meeting and one of only a few meetings held in the USA.

On the first day of COMEDS, 30 May 2017, the 59 MDW and the 60 MDG were invited by AFMSA Research and Acquisition Directorate to present research highlighting the newest technological advancements to NATO surgeon generals and their staff. The event was held at the Gen. Jacob E. Smart Conference Center in Joint-Base Andrews. Breakout sessions between the general plenary meeting provided an excellent venue to showcase the medical research at COMEDS. Three representatives of the 59th MDW presented their respective research projects in poster format during the meeting breaks. They were also able to sit in for portions of the meeting as committee members gave various reports. Mr. Manuel Caballero, from the 59th Medical Wing Center for Advanced Molecular Detection (CAMD), demonstrated the Biomeme, a hand-held real-time PCR device. Mr. Caballero spoke with a staff member from Turkey's Surgeon General Office regarding device amplification speeds. CAPT Tahk, from the Air Force RESTOR Program and Dr. Shelia Savell from the Air Force ECRC also attended the event. Meeting topics discussed included the Patient Evacuation Co-ordination Cell (PECC) and the need to continue development and training, concerns about the shortage of medical personnel and a report on the amount of funding provided by various countries for the medical training of Iraqi military personnel.



59 MDW DECS Takes Lead for Environmental Protection Agency's New Final Rule Governing Effluent Limitations Guidelines & Standards for the Dental Category

The EPA Final Rule on Effluent Limitations Guidelines and Standards for the Dental Category, changes to Clean Water Act, 40 CFR parts 403 and 441, were published in the Federal Register on 14 June 2017, and takes effect 14 July 2017. The Final EPA Rule will impact all Air Force general dentistry and some specialty clinics throughout the world. While twelve states and several municipalities have existing regulations concerning how amalgam waste is handled related to the dental suction and sewer system, this new rule mandates minimum standards on a national level. Industrial mercury pollution was the subject of the Minamata Convention on Mercury in October of 2013. Since 2001, the Governing Council of the United Nations Environment Programme (UNEP) has assessed the chemistry, environmental effects, health effects, sources, transportation, prevention and control technologies concerning mercury. The convention was named for the fishing community which developed acute mercury toxicity eating fish from Minamata Bay. The bay was contaminated from a fertilizer plant releasing industrial byproducts containing mercury. Fish were exposed to high levels of mercury; residents ate the fish and developed a Parkinson's-like disorder, severely afflicted members of the community, including infants, that died 1 month from onset of the disorder. The new EPA rule fulfills a section in the 2013 International Treaty calling for reduction of the release of mercury and mercury containing compounds by dental offices.

In the United States, Dental is the largest industry expelling mercury into the waste water system, all other industries have mandatory controls on effluent levels. It is estimated that 5 tons of mercury and 5 tons other metals make up all solids in effluent water (EPA rule does not address dissolved [soluble] metals in effluent—estimated to be about 0.5 percent). There is technology available at the clinic-level for solids removal; for instance, amalgam separators connected to a central vacuum system are available for ~\$1000 which handle up to 5 chairs, (recycle programs are also available). The normal life expectancy of amalgam separators is determined by the EPA rule to be 10 years. Overall, the EPA

estimates \$800/year annual maintenance cost for small dental office configurations.

Air Force Dental Clinics are currently about 75 percent compliant with the new rule, largely due to an initiative to implement American Dental Association Best Management Practices since 2008. Going forward the requirement is that no later than 14 July 2020, existing dental offices without Amalgam Separators must install, operate and properly maintain an amalgam separator that is compliant and certified to achieve at least 95 percent removal efficiency of solids (In accordance with ISO 11143). Additionally, offices with amalgam separators must replace them at the 10 year mark or in 2027, whichever is earlier.

As Dental Clinics and MTFs have questions or concerns with the Final EPA Rule, the 59 MDW DECS is available for consultation regarding choices and configuration recommendations as well as reporting requirements through the base Civil Engineer. For overseas bases, most are already compliant, but it is recommended that they follow US rules unless the local rule is more stringent. Mobile dental units are not included in rule, although amalgam separators are available for single chair systems.

The documentation and recordkeeping required to be compliant with the Final EPA Rule includes a One-Time Compliance Report submitted to Control Authority (POTW) no later than 3 years from effective date of rule by existing clinics.



Science and Technology Contact Information



Our Vision:

Grow Medical Leaders, Drive Innovations in Patient Centered Care and Readiness

Our Mission:

Conduct clinical studies and translational research and apply knowledge gained to enhance performance, protect the force, and advance medical care and capabilities

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